

In the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1 1. (Currently Amended) A light source device comprising:
 - 2 a concave reflector having an open front end section;
 - 3 a light source having a light emitting unit, the unit being positioned
 - 4 on a focal point of the reflector;
 - 5 a cover attached to the open front end section of the reflector to
 - 6 cover the open front end section, the cover having an air inflow opening
 - 7 provided at a side section thereof in relation to the open front end section,
 - 8 at least a part of the cover being made of a transparent material, the part
 - 9 being a light passage through which light emitted by the light source and
 - 10 reflected by the reflector passes;
 - 11 a fan having an air outflow opening, the fan being provided so that
 - 12 airflow created by the fan and blown through the air outflow opening is
 - 13 directed to the air inflow opening of the cover, without obstructing the light
 - 14 passing through the light passage, a direction of the airflow blown through
 - 15 the air outflow opening of the fan being opposed to a direction of the light
 - 16 passing through the light passage; and
 - 17 an air control unit provided between the air outflow opening of the
 - 18 fan and the air inflow opening of the cover, the air control unit controlling
 - 19 the airflow blown through the air outflow opening of the fan so that the
 - 20 airflow blown through the air outflow opening is flown into the reflector
 - 21 through the air inflow opening of the cover and directed at least to one
 - 22 specific section of the light source, thus cooling the specific section.
- 1 2. (Original) The light source device according to claim 1, wherein the light
- 2 source has a first and a second sealing section sealing electrodes on
- 3 both ends of the light source, the light emitting unit being interposed
- 4 between the first and second sealing sections, the first sealing section

5 being closer to the open front end section of the reflector than the second
6 sealing section, the specific section of the light source to be cooled being
7 the first sealing section.

1 3. (Canceled).

1 4. (Currently Amended) The light source device according to claim 1,
2 wherein the airflow blown through the air inflow opening of the cover to
3 the specific section of the light source is almost parallel to ~~an imaginary a~~
4 straight line ~~connected~~ between the air inflow opening and the specific
5 section in the reflector, except in the vicinity of the air inflow opening and
6 the specific section.

1 5. (Original) The light source device according to claim 2, wherein the
2 reflector has an air outflow opening positioned as opposed to the open
3 front end section of the reflector, the air outflow opening of the reflector
4 being closer to the second sealing section of the light source than to the
5 first sealing section, a part of the airflow directed to the specific section of
6 the light source hitting an inner surface of the concave reflector and
7 swirling along the inner surface, the swirling airflow cooling the second
8 sealing section of the light source and being discharged through the air
9 outflow opening of the reflector.

1 6. (Original) The light source device according to claim 1, wherein the air
2 control unit has at least one air control plate to provide two or more of air
3 ducts in the air control unit, the airflow created by the fan being flown into
4 the reflector through the air outflow opening of the fan, the air ducts and
5 the air inflow opening of the cover.

1 7. (Currently Amended) ~~The A~~ light source device ~~according to claim 6,~~
2 wherein comprising:
3 a concave reflector having an open front end section;

4 a light source having a light emitting unit, the unit being positioned
5 on a focal point of the reflector;
6 a cover attached to the open front end section of the reflector to
7 cover the open front end section, the cover having an air inflow opening
8 provided at a side section thereof in relation to the open front end section,
9 at least a part of the cover being made of a transparent material, the part
10 being a light passage through which light emitted by the light source and
11 reflected by the reflector passes;
12 a fan having an air outflow opening, the fan being provided so that
13 airflow created by the fan and blown through the air outflow opening is
14 directed to the air inflow opening of the cover, without obstructing the light
15 passing through the light passage; and
16 an air control unit provided between the air outflow opening of the
17 fan and the air inflow opening of the cover, the air control unit having at
18 least one control plate to provide two or more air ducts in the air control
19 unit, the air control unit controlling the airflow blown through the air
20 outflow opening of the fan so that the airflow blown through the air outflow
21 opening is flown into the reflector through the air ducts and the air inflow
22 opening of the cover and directed at least to one specific section of the
23 light source, thus cooling the specific section, the air control plate controls
24 controlling the airflow flowing through the air ducts so that the airflow
25 directed to the specific section of the light source exhibits a higher wind
26 velocity than airflow directed to other sections of the light source.

1 8. (Original) The light source device according to claim 7, wherein the light
2 source has a first and a second sealing section sealing electrodes on
3 both ends of the light source, the light emitting unit being interposed
4 between the first and second sealing sections, the first sealing section
5 being closer to the open front end section of the reflector than the second
6 sealing section being, the specific section of the light source to be cooled
7 by the airflow, that is controlled by the air control plate while passing

8 through the air ducts and is directed thereto, being the first sealing
9 section.

1 9. (Currently Amended) The light source device according to claim 7,
2 wherein the air control plate controls the airflow flowing through the air
3 ducts so that the airflow blown through the air inflow opening of the cover
4 to the specific section of the light source is almost parallel to ~~an imaginary~~
5 a straight line connected between the air inflow opening and the specific
6 section in the reflector, except in the vicinity of the air inflow opening and
7 the specific section.

1 10. (Original) The light source device according to claim 8, wherein the
2 reflector has an air outflow opening positioned as opposed to the open
3 front end section of the reflector, the air outflow opening of the reflector
4 being closer to the second sealing section of the light source than to the
5 first sealing section, the air control plate controlling the airflow flowing
6 through the air ducts so that a part of the airflow directed to the specific
7 section of the light source hits an inner surface of the concave reflector
8 and swirls along the inner surface, the swirling airflow cooling the second
9 sealing section of the light source and being discharged through the air
10 outflow opening of the reflector.

1 11. (New) A light source device comprising:
2 a concave reflector having an open front end section;
3 a light source having a first and a second sealing section sealing
4 electrodes on both ends of the light source, the light source also having a
5 light emitting unit, the unit being positioned on a focal point of the reflector
6 between the first and second sealing sections, the first sealing section
7 being closer to the open front end section of the reflector than the second
8 sealing section, the specific section of the light source to be cooled being
9 the first sealing section;

10 the reflector having an air outflow opening positioned as opposed
11 to the open front end section of the reflector, the air outflow opening of
12 the reflector being closer to the second sealing section of the light source
13 than to the first sealing section, a part of the airflow directed to the
14 specific section of the light source hitting an inner surface of the concave
15 reflector and swirling along the inner surface, the swirling airflow cooling
16 the second sealing section of the light source and being discharged
17 through the air outflow opening of the reflector;

18 a cover attached to the open front end section of the reflector to
19 cover the open front end section, the cover having an air inflow opening
20 provided at a side section thereof in relation to the open front end section,
21 at least a part of the cover being made of a transparent material, the part
22 being a light passage through which light emitted by the light source and
23 reflected by the reflector passes;

24 a fan having an air outflow opening, the fan being provided so that
25 airflow created by the fan and blown through the air outflow opening is
26 directed to the air inflow opening of the cover, without obstructing the light
27 passing through the light passage; and

28 an air control unit provided between the air outflow opening of the
29 fan and the air inflow opening of the cover, the air control unit controlling
30 the airflow blown through the air outflow opening of the fan so that the
31 airflow blown through the air outflow opening is flown into the reflector
32 through the air inflow opening of the cover and directed at least to one
33 specific section of the light source, thus cooling the specific section.

- 1 12. (New) The light source device according to claim 11, wherein the airflow
2 blown through the air inflow opening of the cover to the specific section of
3 the light source is almost parallel to a straight line between the air inflow
4 opening and the specific section in the reflector, except in the vicinity of
5 the air inflow opening and the specific section.